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EXAMINER

SHAPIRO, LEONID

ART UNIT

PAPER NUMBER

2677

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/834,826	Applicant(s) NEGOI ET AL.	
	Examiner Leonid Shapiro	Art Unit 2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-13 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13, 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 6, 10, 18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Todokoro et al. (US Patent No. 5,659,328).

As to claim 1, Todokoro et al. teaches a driver circuit for display device (See Col. 1, Lines 9-12) comprising: means for storing a basic setting of an adjustable characteristic (See Fig. 1, item 11, from Col. 8, Line 66 to Col. 9, Line 2) of the driver circuit (in the reference is equivalent to electron beam generating apparatus) (See Fig. 1, Col. 8, Lines 19-20); characterized in that the driver circuit includes a means for storing a correction factor (in the reference correction value) (See Fig. 1, item 8, Col. 8, Lines 60-65) to correct the basic setting of the adjustable characteristic of the driver circuit (See Fig. 1, item 8, Col. 8, Lines 63-65, Fig. 2, item S25) and in that the driver circuit is operative to adjust the adjustable characteristic based on the base setting (See Fig. 1, items 9, 11, from Col. 11, Line 61 to Col. 12, Line 31) and the correction factor by modifying the value of the basic setting by the value of correction factor (See Fig. 3, item S35, Col. 12, Lines 27-31).

As to claim 2, Todokoro et al. teaches a means for storing and accessing a correction factor to correct the basic setting of the adjustable characteristic of the driver circuit (See Fig. 1, items 7-8, 10, 57-59).

As to claim 6, Todokoro et al. teaches a method of adjusting an individual property of a display module containing a display device and a driver circuit connected to this display device (See Col. 1, Lines 8-12 and Col. 4, Lines 25-42) characterized in that the method including following steps;

determining a basic setting based on expected characteristics of the display device and characteristics of the driver circuit (See Fig. 2, item S23, Col. 9, Lines 53-58),

storing the determined basic setting to be used by the driver circuit (See Fig. 2, item S23, Col. 9, Lines 53-58),

determining a correction factor to the basic setting based on the actual characteristic of the display device and characteristics of the driver circuit when the basic setting is used (Fig. 3, item 34, Col. 12, Lines 16-26), storing the correction factor to be used by the driver circuit (See Fig. 1, item 8, Col. 8, Lines 60-62), and

adjusting the driver circuit by modifying the value of stored basic setting by the value of the stored correction factor to adjust the display module (See Fig. 3, item S35, from Col. 11, Line 41 to Col. 12, Line 26).

As to claim 10, Todokoro et al. teaches a driver circuit for display device (See Col. 1, Lines 9-12) comprising:

means for storing a basic setting of an adjustable characteristic (See Fig. 1, item 11, from Col. 8, Line 57 to Col. 9, Line 2) of the driver circuit (in the reference is equivalent to electron beam generating apparatus) (See Fig. 1, Col. 8, Lines 19-20);

means for storing a correction factor (See Fig. 1, item 8, Col. 8, Lines 60-62) to correct the basic setting of the adjustable characteristic of the driver circuit (See Fig. 1, item 8, Col. 8, Lines 63-65), and

means for generating a drive signal for the display device that is determined by the value of the stored basic setting as modified by the value of the stored correction factor (See Figs. 1, items 9,11, from Col. 11, Line 61 to Col. 12, Line 31).

As to claim 18, Todokoro et al. teaches a display module (See Fig. 1, Col. 8, Lins 19-20) comprising:

a display device (See Fig. 1, item 1); and

a driver device (See Fig. 1, items 2-14, Col. 8, Lines 19-28) in communication with display device (See Fig. 1, item 1) the driver device in communication with a first memory, adapted for storing a basic setting of an adjustable characteristic of the driver circuit (See Fig. 1, item 11, from Col. 8, Line 66 to Col. 9, Line 2); and a second memory, adapted for storing a correction factor to correct the basic setting to correct the basic setting (See Fig. 1, item 8, Col. 8, Lines 57-65) and in the driver circuit is operative to adjust the adjustable characteristic based on the base setting and the correction factor (See Fig. 1, items 9,11, from Col. 11, Line 61 to Col. 12, Line 31).

As to claim 20, Todokoro et al. teaches the basic setting is based upon the spread in the manufacturing process of the driver circuit (See from Col. 3, Line 58 to Col. 4, Line 24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3, 8-9, 11-13, 16-17, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Todokoro et al. as aforementioned in claims 1, 6, 10 and 18 in view of Yamamoto (US Patent No. 5,515,074).

As to claim 3, Todokoro et al. do not disclose basic setting of an adjustable driver characteristic is a PROM type.

Yamamoto teaches basic setting of an adjustable driver characteristic is a PROM type (See Fig. 1, item 14, in description See Col.3, Lines 3-4).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Yamamoto into the Todokoro et al. system in order not to adjust display density automatically (See Abstract in the Yamamoto reference).

As to claim 8, Todokoro et al. does not disclose to adjust the adjustable characteristic based on the base setting and the correction factor.

Yamamoto teaches to adjust the adjustable characteristic based on the base setting and the correction factor (See Fig. 1-2, items ST6,ST6A,ST7, in description See Col. 4, Lines 61-68 and Col.5, Lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Yamamoto into the Todokoro et al. system in order not to adjust display density automatically (See Abstract in the Yamamoto reference).

As to claims 9, 19, Todokoro et al. does not disclose means for deriving a temperature correction factor determined by the ambient temperature in which the display device is operated and means for to adjust the adjustable characteristic based on the base setting and the ambient temperature (See Fig. 1-2, items ST6,ST6A,ST7, in description See Col. 4, Lines 61-68 and Col.5, Lines 1-5).

Yamamoto teaches means for deriving a temperature correction factor determined by the ambient temperature in which the display device is operated (See Fig. 1, item 16, and Fig. 2, item St1, Col. 3, Lines 49-55) and means for to adjust the adjustable characteristic based on the base setting and the ambient temperature (See Fig. 1-2, items ST6,ST6A,ST7, in description See Col. 4, Lines 61-68 and Col.5, Lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Yamamoto into the Todokoro et al. system in order not to adjust display density automatically (See Abstract in the Yamamoto reference).

As to claims 11, 16, Todokoro does not disclose means for deriving the correction factor by a calibration operation based on upon measurement of optical quality of the display module.

Yamamoto teaches means for deriving the correction factor by a calibration operation based on upon measurement of optical quality of the display module (See Fig. 2, items ST3-ST5, ST9, in description See from Col. 3, Line 57 to Col. 4, Line 5).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Yamamoto into the Todokoro et al. system in order not to adjust display density automatically (See Abstract in the Yamamoto reference).

As to claim 12, Todokoro et al. does not disclose the basic setting is based upon a typical temperature dependence of a typical display device.

Yamamoto teaches the basic setting is based upon a typical temperature dependence of a typical display device (See Fig. 2, items ST3-ST5, ST9, in description See from Col. 3, Line 57 to Col. 4, Line 5).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Yamamoto into the Todokoro et al. system in order not to adjust display density automatically (See Abstract in the Yamamoto reference).

As to claim 13, Todokoro does not disclose the correction factor is based on a particular model of display devices, all of which are then operable with the driver circuit and without adjustment of the contrast of the display device by the user.

Yamamoto teaches the correction factor is based on a particular model of display devices, all of which are then operable with the driver circuit and without

Art Unit: 2677

adjustment of the contrast of the display device by the user (See Fig. 2, items ST3-ST5, ST9, in description See from Col. 3, Line 57 to Col. 4, Line 5).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Yamamoto into the Todokoro et al. system in order not to adjust display density automatically (See Abstract in the Yamamoto reference).

As to claim 17, Todokoro does not disclose deriving an output signal of the driver circuit based upon both stored basic setting and the stored correction factor.

Yamamoto teaches deriving an output signal of the driver circuit based upon both stored basic setting and the stored correction factor (See Figs. 1-4, items 160, 270, in description See Col. 7, Lines 28-31 and from Col. 9, Line 57 to Col. 10, Line 8 and from Col. 10, Line 57 to Col. 11, Line 11).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Yamamoto into the Todokoro et al. system in order not to adjust display density automatically (See Abstract in the Yamamoto reference).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Todokoro et al. as aforementioned in claim 1 in view of Inoue (US Patent No. 5,517,212).

Todokoro et al. does not teach the correction factor has a substantially smaller adjustment range than the basic setting of the adjustable characteristic of the driver circuit.

Inoue teaches the correction factor has a substantially smaller adjustment range than the basic setting of the adjustable characteristic of the driver circuit, with range of adjustment of 2V with reference of peak voltage 20V (See Fig. 2-3, items 13, Vlcd, in description see Col. 4, Lines 39-44).

It would have been obvious to one of ordinary skill in the art at the time of invention to use range of adjustment in relation to peak voltage as described by Inoue in Todokoro et al. apparatus in order to increase flexibility of adjustment circuit (See Col.2, Lines 19-20 in Inoue reference).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Todokoro et al. as aforementioned in claim 1 in view of Conover et al. (US Patent No. 6,414,664 B1).

Todokoro et al. does not show the driver circuit and a particular display device connected to the driver circuit, characterized in that the correction factor in the means for storing a correction factor is based on an individual property of the particular display device.

Conover et al. teaches the driver circuit (voltage generator) (See Fig. 2, item 270, in description See Col. 8, Lines 34-35) and a particular display device connected to the driver circuit, characterized in that the correction factor in the means for storing a

correction factor is based on an individual property of the particular display device (See Figs. 4, items 430-460 in description See from Col. 9, Line 57 to Col. 10, Line 8 and from Col. 10, Line 57 to Col. 11, Line 11).

It would have been obvious to one of ordinary skill in the art at the time of invention to use range of adjustment in relation to peak voltage as described by Conover et al. in the Todokoro et al. apparatus in order to control contrast (See Col. 4, Lines 31-35 in Conover et al. reference).

Response to Arguments

5. Applicant's arguments filed on 11.22.05 have been fully considered but they are not persuasive:

On page 7, last paragraph of Remarks, Applicant's stated that Action's citations to the reference indicate disclosure of "correction factor" and "correction means". However Action and reference clearly "means" (See Fig. 1, item 8) and "correction factor" which in the reference is equivalent to the correction value.

On page 8, 1st paragraph of Remarks, Applicant's stated that correction memory with correction values is the "basic settings". However, Action and reference clearly identify memory 11 with initial values, in Fig. 1 as basic settings (See from Col. 8, Line 66 to Col. 9, Line 2).

On the same page, second to forth paragraphs of Remarks, Applicant's stated item 8 of Fig. 1 serving to teach Applicant's "basic setting". However, after initial (basic) setting were used, correction memory will hold combination of the basic and the

correction values, as cited in claim 1: "the driver is operable to adjust the adjustable characteristic by modifying the value of basic setting by the value of correction factor", that means that adjustable characteristic of the driver circuit is operable with combination of initial (basic) setting and the value of correction factor.

The same arguments will apply to the independent claims 6, 10 and 18.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Telephone inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LS
02.02.06

AMR A. AWAD
PRIMARY EXAMINER
